

REMARKS

Claims 1-24 are pending in this application.

Claims 1-24 have been rejected.

Claims 1, 4, 6-8, 10, 13, 15-17, 19, and 22-24 have been amended as shown above.

Reconsideration and full allowance of Claims 1-24 are respectfully requested.

I. OBJECTIONS TO THE SPECIFICATION

The Office Action objected to the title of the invention as not being descriptive. The Office Action requested a new title that is clearly indicative of the invention to which the claims are directed. In response, the Applicant has amended the title to now recite “Processor Pipeline Cache Miss Apparatus and Method of Operation,” which Applicant believes is more clearly indicative of the invention to which the claims are directed (*See, for example, Claims 1, 10 and 19*). Accordingly, the Applicant respectfully requests the Examiner to withdraw the objection to the title of the application.

II. REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claims 1-9 and 19-24 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,851,993 to Chen et al. (“*Chen*”). This rejection is respectfully traversed.

A cited prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as

they are in the claims. MPEP § 2131; *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). Anticipation is only shown where each and every limitation of the claimed invention is found in a single cited prior art reference. MPEP § 2131; *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985).

Chen recites a cache bypass operation whereby data missing from the cache is retrieved from a main memory and provided via a bypass data path directly to an execution unit. (*Chen Abstract, Col. 3, Lines 24-28 and Col. 4, Lines 31-37*). However, *Chen* lacks any mention that “a second data value” from a missed cache line is transferred to a functional unit in one of the N processing stages “to replace a first data value” transferred to the functional unit from a data cache without being first stored in a destination register, as recited in independent Claims 1 and 19. As a result, *Chen* fails to anticipate the Applicant’s invention as recited in Claims 1 and 19 (and their dependent claims).

Accordingly, the Applicant respectfully requests that the Examiner withdraw the § 102(b) rejections of Claims 1-9 and 19-24.

III. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 10-18 under 35 U.S.C. § 103(a) as being unpatentable over *Chen* in view of U.S. Patent No. 4,777,589 to Boettner et al. (“*Boettner*”). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142; *In re Fritch*, 972 F.2d 1260,

1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. MPEP § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure. MPEP § 2142.

As described above, *Chen* fails to disclose, teach or suggest “a second data value” from a missed cache line is transferred to a functional unit in one of the N processing stages “to replace a first data value,” as also recited in Claim 10. In addition, the Applicant respectfully submits that *Boettner* also does not disclose, teach or suggest the elements of Claim 10. Furthermore, the Applicant respectfully submits that the combination of *Chen* and *Boettner* does not teach or suggest the elements of Claim 10 (and its dependent claims). Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejection and full allowance of Claims 10-18.

IV. CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining claims in the application are in condition for allowance and respectfully requests an early allowance of such claims.

SUMMARY

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at wmunck@davismunck.com.

The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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